

received by the U.S. Patent and Trademark Office on October 17, 2000, thereby setting a term for filing a Brief to expire December 17, 2000. The Examiner is respectfully requested to reconsider the final rejections of the claims, as set forth in that Office Action, for the following reasons.

THE PENDING CLAIMS

None of the claims currently pending in this application are being amended herein, but all have been reproduced below for the Examiner's convenience. In keeping with the changes to 37 C.F.R. § 1.121 to implement the Patent Business Goals, the pending claims will not have a parenthetical expression following the claim number.

1. A data transmission method for host and target devices connected by a serial bus, said method comprising the steps of:

performing bi-directional communication between the host and target devices; and

selectively setting a data transfer method to be performed from a plurality of data transfer methods including a synchronous transfer method, which performs flow control, and an asynchronous transfer method by using the bi-directional

communication,

wherein the data transfer method is set by the host device in accordance with a data transfer method set in the target device.

2. The method according to claim 1, wherein the plurality of data transfer methods includes a PULL model, in which the target device reads data from the host device, a response model, in which a response is returned in a unit of block transfer, a simplified response model, in which a response of the simplified response model is to simplify, a PUSH model, in which the host device writes data into the target device, and an isochronous model, which uses an isochronous transfer.

4. The method according to claim 2, wherein the PULL model is a PULL data transfer method in which data transfer is performed by reading data of the host device by the target device.

5. The method according to claim 1, wherein the serial bus is a bus adapted to or based on IEEE 1394 standards.

6. The method according to claim 1, wherein the

serial bus is a bus adapted to or based on Universal Serial Bus standards.

7. The method according to claim 1, wherein the host device provides image data.

8. The method according to claim 7, wherein the target device forms a visible image, based on the image data, on a print medium.

9. The method according to claim 7, wherein the target device stores the image data into a storage medium.

10. An image processing apparatus comprising:
communication means for performing communication with
a target device by:

performing bi-directional communication between
a host device and the target device, and

selectively setting a data transfer method to be
performed from a plurality of data transfer methods including a
synchronous transfer method, which performs flow control, and an
asynchronous transfer method by using the bi-directional
communication, wherein the data transfer method is set by the

host device in accordance with a data transfer method set in the target device; and

transmission means for transmitting image data to the target device via said communication means.

11. An image processing apparatus comprising:

communication means for performing communication with a host device by:

performing bi-directional communication between the host device and a target device, and

selectively setting a data transfer method to be performed from a plurality of data transfer methods including a synchronous transfer method, which performs flow control, and an asynchronous transfer method by using the bi-directional communication, wherein the data transfer method is set by the host device in accordance with a data transfer method set in the target device; and

processing means for processing image data received from the host device via said communication means.

12. A data transmission apparatus connected to a serial bus, comprising:

communication means for performing bi-directional

communication with a target device; and

setting means for selectively setting a data transfer method to be performed from a plurality of data transfer methods including a synchronous transfer method, which performs flow control, and an asynchronous transfer method by using the bi-directional communication,

wherein the data transfer method is set in accordance with a data transfer method set in the target device.

13. The apparatus according to claim 12, wherein the plurality of data transfer methods includes a PULL mode, in which the target device reads data from the apparatus, a response model, in which a response is returned in a unit of block transfer, a simplified response model, in which a response of the simplified response model is to simplify, a PUSH model, in which the apparatus writes data into the target device, and an isochronous model, which uses an isochronous transfer.

15. The apparatus according to claim 13, wherein the PULL model is a PULL data transfer method in which data transfer is performed by reading data of said apparatus by the target device.

16. The apparatus according to claim 12, wherein image data is transferred.

17. A data transmission apparatus connected to a serial bus, said apparatus comprising:

communication means for performing bi-directional communication with a host device; and

transfer means for performing data transfer with the host device by a data transfer method selectively set from a plurality of data transfer methods including a synchronous transfer method, which performs flow control, and an asynchronous transfer method by using the bi-directional communication,

wherein the data transfer method is set by the host device in accordance with a data transfer method set in the apparatus.

18. The apparatus according to claim 17, wherein the plurality of data transfer methods includes a PULL model, in which said apparatus reads data from the host device, a response model, in which a response is returned in a unit of block transfer, a simplified response model, in which a response of the simplified response model is to simplify, a PUSH model, in which the host device writes data into said apparatus, and an

isochronous model, which uses an isochronous transfer.

20. The apparatus according to claim 18, wherein the PULL model is a PULL data transfer method in which data transfer is performed by reading data of the host device by said apparatus.

21. The apparatus according to claim 17, further comprising formation means for forming a visible image on a print medium based on data received by said transfer means.

22. A data transmission system for transferring data through a serial bus, comprising:

communication means for performing bi-directional communication between host and target devices; and

setting means for selectively setting a data transfer method to be performed from a plurality of data transfer methods, including a synchronous transfer method, which performs flow control, and an asynchronous transfer method by using the bi-directional communication,

wherein the data transfer method is set by the host device in accordance with a data transfer method set in the target device.

23. The system according to claim 22, wherein the plurality of data transfer methods includes a PULL model, in which the target device reads data from the host device, a response model, in which a response is returned in a unit of block transfer, a simplified response model, in which a response of the simplified response model is to simplify, a PUSH model, in which the host device writes data into the target device, and an isochronous model, which uses an isochronous transfer.

25. A data transmission method of host and target devices which are connected by a serial bus, said method comprising the steps of:

transferring data from the host device to the target device, by using a transfer method selected by the host device from an isochronous transfer method and an asynchronous transfer method in accordance with a data transfer method set in the target device; and

transferring a procedure signal for transfer of the data to the host and target devices by a common asynchronous transfer.

26. The method according to claim 25, wherein the asynchronous transfer method includes a Push Buffer model, in

which the host device writes data into the target device, and a Pull Buffer model, in which the target device reads data from the host device.

27. The method according to claim 25, wherein said host device sets the data transfer method corresponding to the target device, based on the procedure signal transferred in the common asynchronous transfer.

28. The method according to claim 25, wherein the host device selects the data transfer method based on the procedure signal transferred in the common asynchronous transfer.

29. The method according to claim 25, wherein the serial bus is a bus adapted to or based on IEEE 1394 standards.

30. The method according to claim 25, wherein the serial bus is a bus adapted to or based in Universal Serial Bus standards.

31. The method according to claim 25, wherein the host device provides image data.

32. The method according to claim 25, wherein the target device forms a visible image on a print medium based on the image data.

33. The method according to claim 31, wherein the target device stores the image data into a storage medium.

34. An image processing apparatus comprising:
communication means for performing communication with a target device by

transferring data from a host device to the target device, by using a transfer method selected by the host device from an isochronous transfer method and an asynchronous transfer method in accordance with a data transfer method set in the target device, and

transferring a procedure signal for transfer of the data to the host and target devices by a common asynchronous transfer; and

transmission means for transmitting image data to the target device via said communication means.

35. An image processing apparatus comprising:
communication means for performing communication with

a host device by

transferring data from the host device to a target device, by using a transfer method selected by the host device from an isochronous transfer method and an asynchronous transfer method in accordance with a data transfer method set in the target device, and

transferring a procedure signal for transfer of the data to the host and target devices by a common asynchronous transfer; and

processing means for processing image data received from the host device via said communication means.

36. A data transmission apparatus connected to a serial bus, comprising:

transfer means for transferring a procedure signal for data transfer by a common asynchronous transfer to a target device; and

transmission means for transmitting data to be transmitted to the target device by using a transfer method, which is selected from an isochronous transfer method and an asynchronous transfer method, in accordance with a data transfer method set in the target device.

37. The apparatus according to claim 35, wherein the asynchronous transfer method includes a PUSH buffer model and a PULL buffer model.

39. The apparatus according to claim 36, wherein said transmission means selects the isochronous transfer method or the asynchronous transfer method based on the procedure signal transferred by the common asynchronous transfer.

41. A data transmission apparatus connected to a serial bus, comprising:

transfer means for transferring a procedure signal for data transfer by a common asynchronous transfer to a host device; and

reception means for receiving data from the host device by using a transfer method selected by the host device from an isochronous transfer method and an asynchronous transfer method in accordance with a data transfer method set in said apparatus.

42. The apparatus according to claim 41, wherein the asynchronous transfer method includes a PUSH buffer model and a PULL buffer model.

43. The apparatus according to claim 41, wherein the host device sets the data transfer method corresponding to said reception means based on the procedure signal transferred by the common asynchronous transfer.

44. The apparatus according to claim 41, wherein the host device selects the data transfer method based on the procedure signal transferred by the common asynchronous transfer.

45. The apparatus according to claim 41, further comprising formation means for forming a visible image on a print medium based on data received by said reception means.

46. A data transmission system for transferring data through a serial bus, comprising:

first transfer means for transferring a procedure signal for data transfer by common asynchronous transfer to host and target devices; and

second transfer means for performing data transfer between said host and target devices by using a transfer method selected by the host device from an isochronous transfer method or an asynchronous transfer method in accordance with a data transfer method set in the target device.

47. The system according to claim 46, wherein the asynchronous transfer method includes a PUSH Buffer model and a PULL Buffer model.

48. The system according to claim 46, wherein the host device sets the data transfer method corresponding to the target device, based on the procedure signal transferred by the common asynchronous transfer.

49. The system according to claim 46, wherein the host device selects the data transfer method based on the procedure signal transferred by the common asynchronous transfer.

50. A computer program product comprising a computer readable medium storing computer program codes for executing data transmission of host and target devices which are connected by a serial bus, said product comprising:

communication process procedure codes for performing bi-directional communication between the host and target devices;
and

setting process procedure codes for selectively setting a data transfer method to be performed from a plurality of data transfer methods including a synchronous transfer method,